

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

This Document contains information affecting the National Defense of the United States, within the meaning of Title 18, Sections 793 and 794, of the U.S. Code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law. The reproduction of this form is prohibited.

SECRET
SECURITY INFORMATION

COUNTRY	USSR/Germany	REPORT	<input type="text"/>	25X1
SUBJECT	Reconstruction of Walter Propulsion Machinery for the Soviets by a German Team at OKB-143, Leningrad	DATE DISTR.	22 May 1953	
		NO. OF PAGES	1	
DATE OF INFO	<input type="text"/>	REQUIREMENT NO.	RD	
PLACE ACQUIRED	<input type="text"/>	REFERENCES		25X1

This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

25X1

25 YEAR
RE-REVIEW

SECRET

STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC						
-------	---	------	---	------	---	-----	---	-----	--	-----	--	--	--	--	--	--

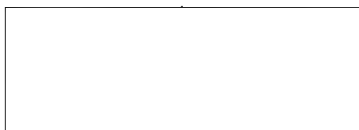
(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

222698

Page Denied

Next 1 Page(s) In Document Denied

SECRET



25X1

CHEMICAL WARFARE AND BIOLOGICAL WARFARE

HYDROGEN PEROXIDE

1. Hydrogen Peroxide was used in SKB 143 from, as far as is known, January 1949. [redacted] not know where it was made or where it was stored. [redacted] the concentration was [redacted] believed [redacted] between 75-78%.

25X1

25X1

2. The material arrived at the shipyard by road. It was carried by SKODA 5-ton trucks adapted for this purpose, and from the trucks it was pumped into the "white metal" containers which were the feed tanks for the test beds.

3. [redacted] the Hydrogen Peroxide was handled in a very haphazard fashion. If it was found that due to impurities present heat was being generated, water would be poured in.

25X1

4. Catalyst Stones. The catalyst stones were slugs about 10 mm long and 5 mm in diameter; they were straw-colour, smooth surface and looked as if they were formed by extrusion. After tests, these slugs had a greyish-white film over them. They were not stuck together, neither had they crumbled; some, however, broke. In later tests (December 1951) the Russians were breaking up their catalyst stones in order to present more surface to the Hydrogen Peroxide.



25X1

SECRET

SECRET

25X1

had a greyish-white film over them. They were not stuck together, neither did they crumble, but some were found to be broken. [redacted]

[redacted] these catalyst stones would not last long [redacted]

25X1

13. The decomposition chamber and the combustion chamber, together with ancillary equipment, were from a Type XVII submarine. The steam was exhausted under water into the NEVA [redacted] the estimated temperature of the steam in the combustion chamber inlet was 425°C.

25X1

14. During this time, the drawing office was engaged in adjusting the original plans. Originally in BLANKENBURG, the Russians had taken exception to all the pipes, conduits and tubes being together on one drawing. Thereafter, the Russian draughtsmen had extracted the several feed and exhaust systems and put them on different drawings. When the time came to construct machinery from these drawings, it was naturally enough found that the installation would not fit. At this stage, the job was handed back to the STATESNY group and the work was begun all over again.

15. [redacted] designing individual test beds, the installation of the mixing chambers in bunkers, the installation of combustion chambers, the dust extractors, pipelines to the NEVA. This work [redacted] completed by January 1949 [redacted]

25X1

25X1

16. While these tests were being promoted, a start was made on building a hull section and a 1:1 model of an engine room was planned.

SKB 143 - Xmas 1951

17. This is roughly the end of the work of the German engineers in LENINGRAD. After this, they kept to their drawing office and amused themselves with their various hobbies until repatriation.

18. Now the hull section had been erected, verisimilitude was carried so far as bulk heads and watertight doors. Glass protected inspection holes were fitted in the hull and there was a hatch for machinery and staff.

19. The turbine was in position, together with the combustion chamber, decomposition chamber, fuel control, pump, switch gear, water-brake and dust extractor [redacted]

25X1

20. The T-Stoff was not, however, stored in bags but in containers, already mentioned.

21. The assembly, such as it was, was tested several times but never under load conditions. There was no reduction gear. [redacted]

25X1

Development of Individual Parts

22. (a) Catalysts

In December 1951, the Russians were breaking up their catalyst stones in order to present more surface to the T-Stoff. [redacted]

25X1

[redacted] The only thing that seemed novel

SECRET

SECRET

25X1

[] was an addition to a catalyst installation in the form of a small additional catalyst holder near the outlet of the decomposition chamber. This was to catch any undecomposed T-Stoff. During the last months, a scheme was put on paper for a completely new design of decomposition chamber. In this, the stones could be withdrawn easily and shaken. [] told by a Russian that in practice catalyst stones were "roasted" before insertion in the decomposition chamber.

25X1

25X1

25X1

(b) Hydrogen Peroxide

[] not know where the T-Stoff came from. [] not know where it is stored. [] not know its concentration. It is [] opinion that the material was delivered at a concentration of 75-78%.

25X1

The hydrogen peroxide arrived at the shipyard by road. It was carried by converted SKODA 5-ton trucks, and from the trucks it was pumped into the white metal containers which were the feeding tanks for the test beds.

(c) Unloading.

There was a hand pump fitted on the truck. [] The only precautions taken were to dress the attendants in aprons, overalls and rubber gloves. [] tried hard to explain to the Russian labour that there was no danger in unloading T-Stoff. He once demonstrated by plunging his hand into the fuel how safe the operation was. Little or no care was taken with the fuel itself or with general cleanliness.

25X1

As a rule, the fuel was used very soon after it was delivered, but on some occasions, it might have to wait a little. If in these times the T-Stoff began to generate heat through the introduction of impurities, water was poured in.

(d) Storage and Piping Material for T-Stoff

Little information could be obtained about plastic bags.

25X1

[] It is known that they were made of IGALIT. They were not introduced into this test series because owing to some alteration in design, the bags were in process of being altered and up to December, 1951, the welding had not been finished. [] in the shipyard [] bags, or T-Stoff being tested in a tank. They were submerged and then pulled to and fro in the water.

25X1

[] this was in fact a test of a plastic bag with T-Stoff []

The T-Stoff containers which were used for the tests were tanks of about 2.5 m. diameter and about 3.5 m. high.

SECRET

SECRET

25X1

On the ground floor also was a watchman's office or orderly room, where the Germans must check in and out. They were only allowed to move within a square mile of this house without escort. Trips to town or further had to be officially sanctioned and an escort had to be applied for.

SKB 143, LENINGRAD. Work on hand in Autumn 1948

8. (a) Checking and sorting of the drawings brought from BLANKENBURG.
- (b) Redrafting of the drawings for the Feed Systems.
- (c) Planning for the individual testing of the Decomposition Chamber.
- (d) Planning for the individual testing of all other parts.
- (e) Planning for the test bed with steam from an outside source.
- (f) Planning for a test bed, the steam to be produced during the test.
- (g) Condenser testing on a special test bed.
- (h) Condenser testing on a general test bed.
- (j) Compressor testing.
- (k) Testing of the steam installation with turbine and compressor by means of a water brake. After the testing of each of the various combinations, final schemes for the development of the assembly were to be drawn up.
- (l) Preparations for gear testing.

SKB 143 LENINGRAD - January 1949

9. By now the papers from BLANKENBURG were being received at LENINGRAD and a number of spare parts such as Decomposition Chambers, Combustion Chambers, fuel controllers (Vierstoffregler); fuel pumps (Dreistoffpumpe) were also received. The fuel controller is believed to be from SIEMENS, the fuel pump from FRANKENTHAL. In addition, a few T-Stoff parts arrived from the LEIPZIG ARMATURENWERK (formerly SCHUMANN).

10. At this time, a testing station had been started at the shipyard.
 The following engineers had access to it:-

STATESNY
 KRAGE
 DETTKE (with his two sons)
 NATHAUS

11. During the autumn 1948, DETTKE and NATHAUS had been unpacking in the shipyard T-stoff gear sent from Germany. Individual test beds were set up for testing decomposition chambers. By January 1949 tests were being made with catalysts. All tests were made under the control of a Russian. Russian mechanics attended to the machinery, the German engineers just stood by when the T-Stoff was poured in. The Germans thought that this was a Russian idea of insurance against accidents or so that a German could get the blame if anything went wrong.

12. The catalysts were of Russian origin and generally referred to as "made in Russia stones". The Germans present did not consider them to be as good as the German product The stones were slugs about 10 mm long and 5 mm diameter. They were straw-colour, smooth and looked as if they were formed by extrusion. After tests, these slugs

25X1

SECRET

SECRET

25X1

NAVAL

PROGRESS OF THE RECONSTRUCTION OF WALTER PROPULSION
MACHINERY BY THE GERMAN TEAM UNDER DR. STATESNY
FROM 1946 UNTIL DECEMBER 1951

Konstruktions Buero GLUECKAUF, BLANKENBURG/HARZ.

25X1

1. [redacted] For the first five months of its existence, this Buero was known as Ingenieur Buero STATESNY; it was renamed Buero ANTIPIIN after the Russian naval officer in charge.

2. ANTIPIIN was a designer and group leader concerned with the redesign of submarine propulsion machinery. In June 1948, he produced five-year contracts which were signed by everybody except two, and these last two finally agreed to three years.

3. The following tasks were undertaken in BLANKENBURG. Items (a) to (e) were to be finished by Christmas 1947:-

- (a) Redesign of various parts of Type XXVI submarine.
- (b) Preparation of special apparatus which would be required in final test bed in LENINGRAD.
- (c) The completion of unfinished drawings.
- (d) Preparation of lists of required apparatus.
- (e) Detailed design of separate parts of special machinery with, wherever applicable, alternative arrangements.
- (f) Small tests for the improvement in design of decomposition chamber. (Zersetzer), Combustion Chamber (Brénnkammer), new arrangements (Neue Reihenordnung). These tasks were not considered to be important but were undertaken to fill in time until the Russian contracts appeared.

4. MENSSSEN started to consider a Mixing Chamber arranged in a ring (Ring-zesetze) and its effect on the other components.

5. In 1948, several pieces of apparatus were packed up and sent away to Russia.

SKB 143, LENINGRAD

6. In June 1948 STATESNY's team arrived in LENINGRAD and they were detailed to work in SKB 143. SKB is said to stand for "Sonder Konstruktions Buero". It is situated in KRASNAYA ULITSA, west of the town sector about 1 km from the last bridge across the river NEVA and on the south bank of the river. There is a shipyard here where the testing of the team's work took place [redacted]

25X1

[redacted] The Buero was directed by the Ministry of Shipbuilding of the USSR in MOSCOW.

25X1

7. The STATESNY group was given accommodation in a large block of flats in the south suburb of LENINGRAD (MOSCOW RAYON), KUSNETSOVSKAYA 18. They lived on the third, fourth and fifth floors and had their office on the ground floor.

SECRET

SECRET

25X1

They were of some sort of white metal of an aluminium appearance and were set in holes filled with water. It was commonly believed that inside the tanks were plastic bags which were the actual containers of the T-Stoff. This had not been confirmed and seems unlikely. From these reservoirs, the T-Stoff was led by means of metal pipes, again aluminium colour, and the bends were made of red hard plastic (Vinidur).

[redacted] information about pickling material (Beize). [redacted] all the pipes were pickled with some material (unknown) to preserve them and the T-Stoff.

25X1

25X1

[redacted] further described "waxing" the inside surface of the pipes. To close all pores on the inside of the pipe lines, molten Stearine was poured into the pipes after they had been pickled. In order to ensure that the whole inside was covered, the pipes were turned by hand during the pouring process. After the pipes had thus been treated, a rod was pushed through each pipe for the purpose of removing all surplus Stearine. This was a further anti-corrosion measure.

(e) BRUECKNER-KANIS Turbine

This test bed turbine had arrived in LENINGRAD before the team got there. It was not used, however, until the tests in December 1951. When the first test was made, the turbine was run up without the cooling system connected. With the ensuing overheating, the turbine shaft surface cracked. Also, as the pressure steam was blown through a grille or sieve on to the turbine plates, the tremendous pressure blew fragments of sieve into the machinery. Several plates were damaged and were repaired locally. These two areas of damage was inspected by a Russian learned body who decided that the shaft was not dangerous and could be used further. It is said that there is a second turbine, also a BRUECKNER-KANIS model. [redacted] this second machine is of a different size and different dimensions it will not be used.

25X1

25X1

(f) Gears

Gears were never used in this test assembly as they were only delivered in December 1951. These two sets of gears arrived [redacted] they came from somewhere near ERFURT [redacted] they were of German origin. As soon as they arrived, one was taken for stripping down by the Russians.

25X1

25X1

One of the gears was to be incorporated in the assembly [redacted] last job [redacted] drawing [redacted] a test arrangement incorporating the second gear as a reversing gear outside the test stand proper and together with its own water brake.

25X1

It should be stressed that the gears were never installed and as far as is known, no German engineer has had anything to do with them in LENINGRAD.

SECRET

SECRET

25X1

(g) Condenser

The condenser and the cooling chamber were by MAKO. The condenser was not satisfactory in the tests and the difficulty of separating CO₂ from H₂O was not overcome [redacted]

25X1

[redacted] metal plates were being inserted in the condenser as an aid to separation.

25X1

(h) Compressors

This was [redacted] made by DRAEGERWERK, LUEBECK. As the gas and fresh water had not been started, the compressor was exhausting water along with the gas.

225X1

(j) Decomposition Chamber

Cast in the LEIPZIGER GIESSEREI and finished by Wolff BUCKAU.

(k) Combustion Chamber

Made by Wolff BUCKAU.

(l) Vierstoffregler

Believed to be SIEMENS.

(m) Dreistoffschalter

Made by SCHULMANN.

(n) Dreistoffpumpe

By FRANKENTHAL or JAEGER.

(o) Glands

These were never water and steam tight; in every test sweet water was lost into the bilges in large amounts.

(p) Couplings

These were solid and made by Wolff BUCKAU.

(q) Plastic Bags

These were made in BITTERFELD and welded in the KUNSTSTOFFSCHULE, HALLE.

(r) Expansion Chamber

At one time the Russians had the idea of inserting a bagful of steel balls about the size of marbles between the decomposition chamber and the combustion chamber. This was to reduce the heat on the light running tests. The Germans convinced them, for the time being at any rate, of the danger of this experiment and the idea was dropped.

SECRET

SECRET

25X1

General Information

25X1

24. [] several submarines about LENINGRAD, but [] they were all of small type about 300 tons and resembled the German WEDDING. []

25X1

25X1

25. Asked about the factory "Fleisch Kombinat" that featured so much in earlier efforts to find out what was happening in LENINGRAD, [] knew the factory quite well and also the refrigeration factory across the road. In both these places there were German prisoners of war employed. [] no development work on naval matters took place there.

25X1

25X1

25X1

26. Early in this report, a certain NATHAUS was mentioned: he was one of the first to work in the shipyard and was an erector. Early in 1949, he was told to pack up his tools as he was going to a special assembly job in MOSCOW. Nothing was heard of him for two years and then a postcard came from a labour camp believed to be in Siberia. With this postcard NATHAUS told his friends that the interpreter detailed to take him to MOSCOW had instead delivered him immediately to the police and now he was serving a five year sentence.

25X1

27. [] caustic about the injudicious questions and observations put into letters from the Western Zone of Germany. STATESNY [] was bothered about the letters from CLAUSEN. These letters always had the appearance of being opened and CLAUSEN's exhortations to STATESNY and his team to come immediately to Western Germany, a land flowing with milk and honey, could have had unfortunate results. Indeed [] letters of this sort may have had something to do with STATESNY himself being kept behind.

25X1

25X1

25X1

28. It has been noted in two or three censorship intercepts that STATESNY has been concerned with a model submarine which he was making for his son. Indeed, at one time, it was thought that there may have been some hidden meaning in these rather childish reports. There was not, in fact, and STATESNY was trying genuinely to build a clockwork submarine for his children. His anxiety will be readily appreciated when a repatriated acquaintance in Eastern Germany wrote to him in LENINGRAD and asked him if the submarine was finished yet.

SECRET

SECRET

25X1

SCIENTIFIC ORDER OF BATTLE(a) EstablishmentsSKB - SONDER KONSTRUKTIONEN BUERO, LENINGRAD

This is a special office devoted to the development of WALTER machinery and is directly controlled by the Ministry of Shipbuilding of the USSR in MOSCOW. Its office and workshop are situated in LENINGRAD in the KRASNAYA ULITSA, west of the town, about one kilometre from the last bridge across the River NEVA and on the south bank.

(b) PersonalitiesRUSSIAN

Naval Col. ANTIPIN - Head of the SKB responsible for the contracts. [redacted]

25X1

Naval Col. SLOTTOPOLSKI - Head of the tech. dept. General knowledge of the entire installation. Blamed specialists for all shortages and defects.
(SLOTTOPOLSKIY)

Frau ROTHSTEIN - Liaison in all technical questions with the specialists. [redacted]

25X1

Eng. MINOVITZKI - General knowledge of shipbuilding jobs (interpreter during the BLANKENBURG period).
(MINOVITSKIY)

Eng. STANKEVITSCH - Departmental manager. General knowledge of entire plant. [redacted]

25X1

Eng. KOLOSOVSKIY - ANTIPIN's deputy (organisation).
(KOLOSOVSKIY)

Naval Col. BRAHMANN - Probably head of the department for training naval personnel for the special installation.

SHLETKOV - Chief of personnel. Responsible for all personal questions of specialists. Head of interpreter service.

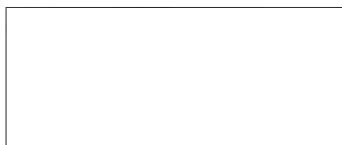
GERMAN

Dr. Friedrich SZATECZNY - Not returned. Head of group. Redesign of the scheme and overall description of the plant.

SECRET

SECRET

25X1

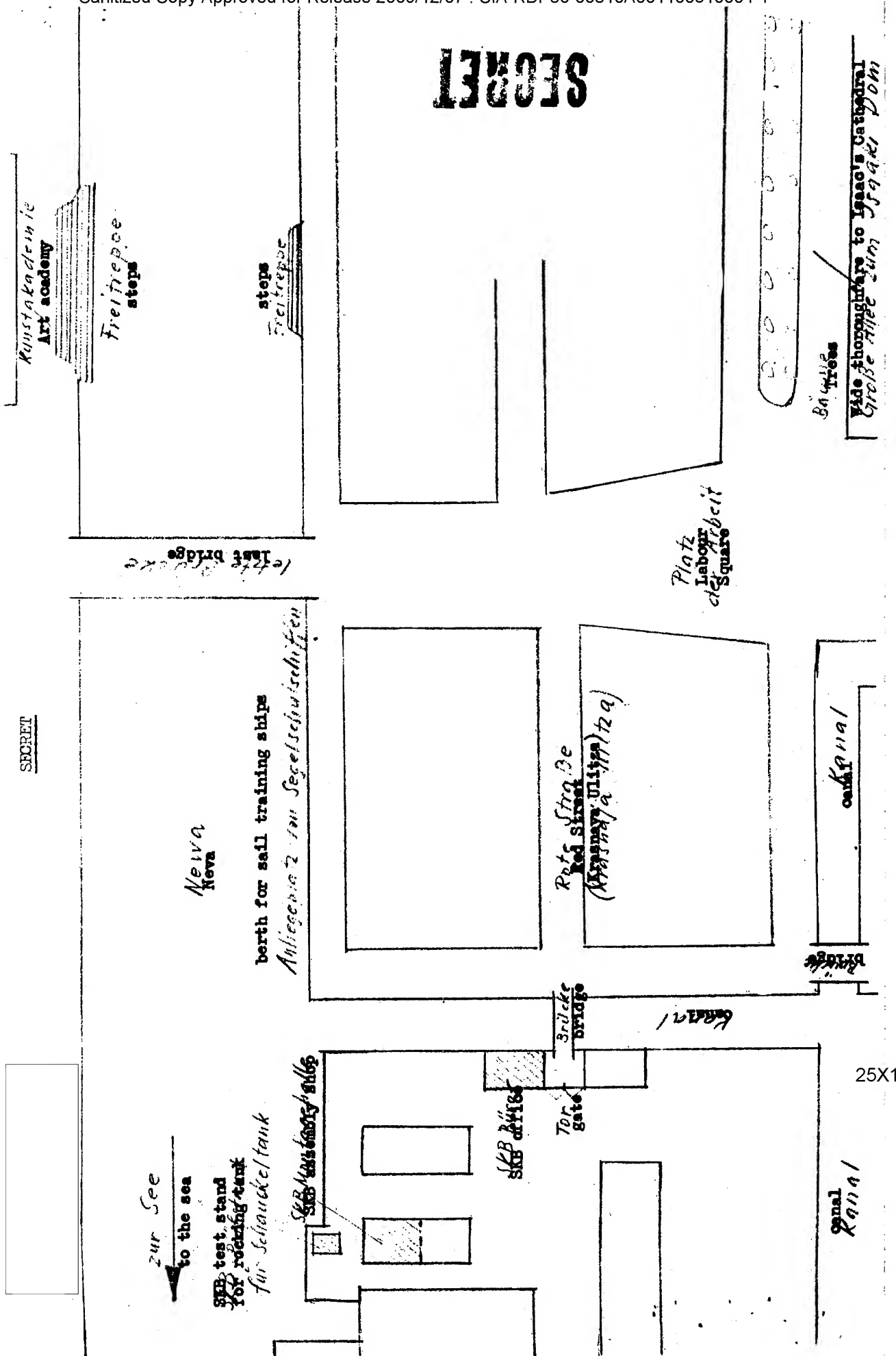


Eng. Ernst MENSSEN	- Not returned. Designer with knowledge of all the apparatus of the installation (new design of a piston 4-material pump).
Dipl. Ing. Eberhard TROMPKE	- Dealt with thermo-dynamic jobs (gas-steam-mixture charts).
Eng. Herbert GRIEBSCH	- General design. Pipelines, foundations, remote control, decomposer.
Eng. Ernst KEPPEL	- General design, pipelines, 3-material switches, insulation.
Eng. Wilhelm SCHUMACHER	- General design, pipelines, combustion chamber. Wendenschloss.
Otto KRAGE	- Assembly direction.
Obermeister Paul DETTKE with son Guenther	- Senior foreman. Assembly of fittings and apparatuses with son Egon.
Obermonteur Jup NATHAUS	- Senior fitter. Supervised assembly of the combustion chamber of the WALTER propulsion unit. Spent most of his time for 15 months in the LENINGRAD shipyard. In Oct. 49 disappeared without trace. In Summer 51 wrote from a punishment camp in SIBERIA reporting that he had been sentenced to 5 years.
Alfred WEISSENBERG	- Lubricating oil pipeline, pipe systems, machine erection.
Frl. Karla WIRTH	- Draughtswoman.

SECRET

Page Denied

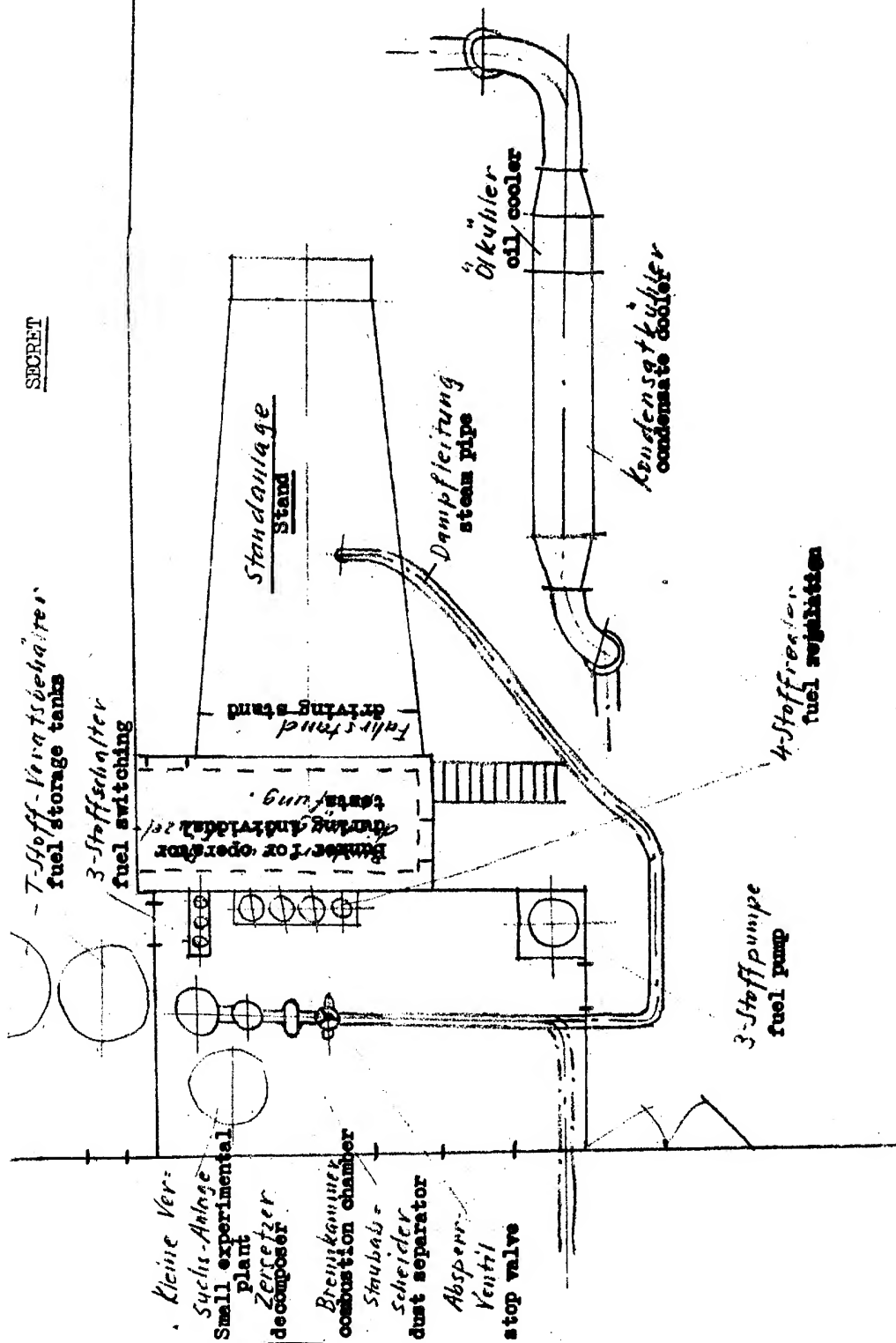
Next 1 Page(s) In Document Denied



SECRET

SECRET

SECRET

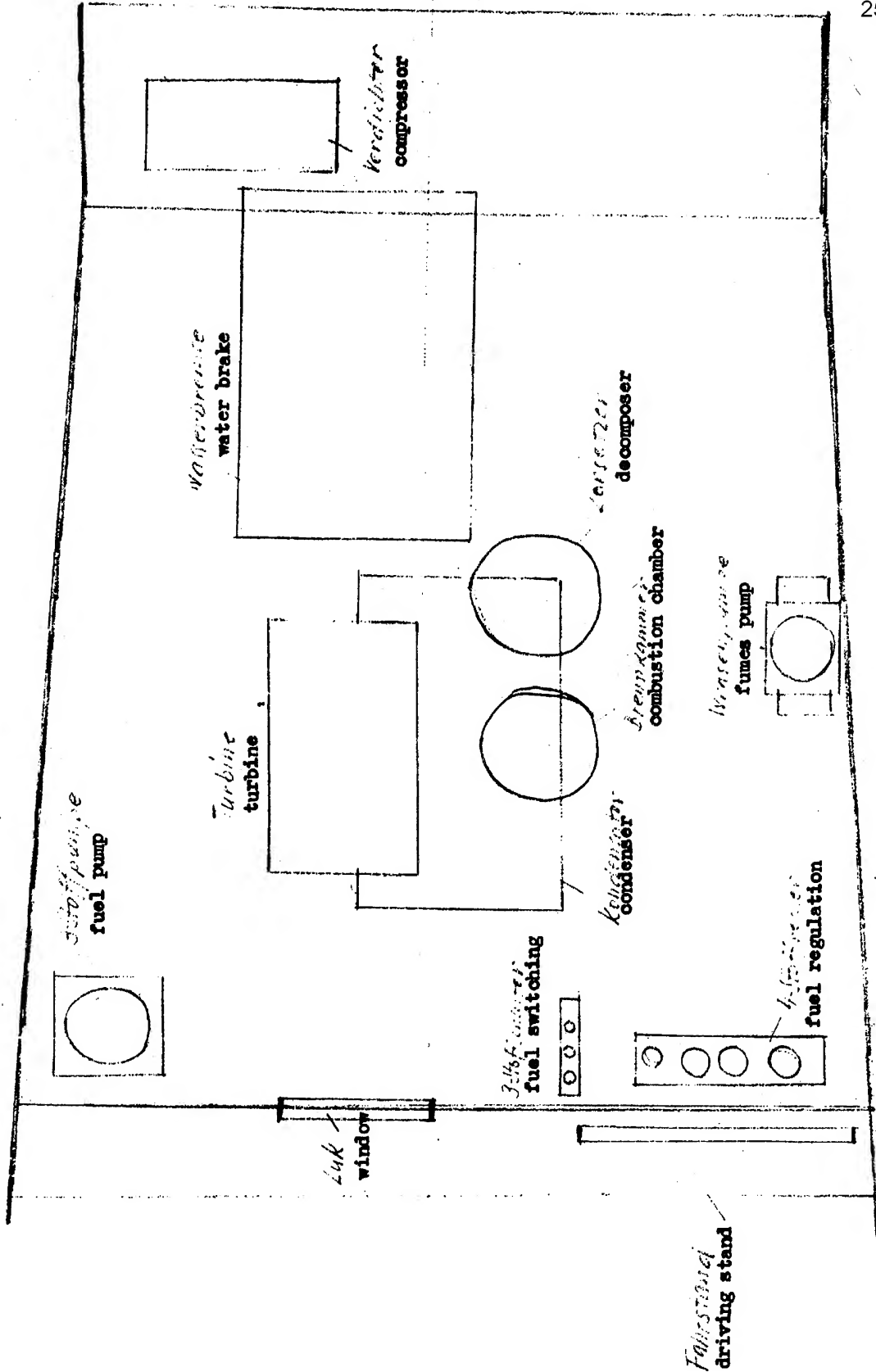




SECRET

Station 25

Stand



SECRET

25X1

Fahrstand
Driving Stand

